What is claimed is:

1. A method for efficient coding of a plurality of bit planes in which transform coefficient data is carried, comprising the steps of:

(a) providing a codeword having a first state designating that a bit plane comprises all binary zeroes, and a second state designating that a bit plane does not comprise all binary zeroes;

(b) coding the most significant bit (MSB) bit plane with said codeword in its first state when the MSB bit plane comprises all binary zeroes;

(c) proceeding from the MSB bit plane toward the least significant bit (LSB) bit plane, coding each successive bit plane that comprises all binary zeroes with said codeword in its first state, if any such successive bit planes are present, until a first bit plane that does not comprise all binary zeroes is reached; and

(d) coding said first bit plane with said codeword in its second state, followed by at least one codeword obtained from a first entropy coding table according to the bits in said first bit plane.

2. The method of claim 1, wherein:

the codeword having the first and second states is a one-bit codeword.

3. The method of claim 1, wherein:

the first entropy coding table does not include a multi-bit codeword for coding a bit plane with all binary zeroes.

4. The method of claim 1, comprising the further step of:

providing a second entropy coding table for coding at least one bit plane that follows the first bit plane; wherein:

the second entropy coding table includes a multi-bit codeword for coding a bit plane with all binary zeroes.

5. The method of claim 1, wherein:

the transform coefficient data comprises Discrete Cosine Transform (DCT) data.

6. The method of claim 1, wherein:

the transform coefficient data comprises image data.

7. A method for decoding a plurality of bit planes in which transform coefficient data is carried, comprising the steps of:

(a) providing a decoding function for a codeword having a first state designating that a bit plane comprises all binary zeroes, and a second state designating that a bit plane does not comprise all binary zeroes;

wherein the most significant bit (MSB) bit plane is coded with said codeword in its first state when the MSB bit plane comprises all binary zeroes;

(b) proceeding from the MSB bit plane toward the least significant bit (LSB) bit plane, decoding said codeword in its first state for each successive bit plane that comprises all binary zeroes, if any such successive bit planes are present, until a first bit plane that does not comprise all binary zeroes is reached; and

(c) decoding said codeword in its second state for said first bit plane, then using a first entropy decoding table for decoding at least one codeword that follows said codeword in its second state;

wherein the at least one codeword is obtained from a first entropy coding table according to the bits in said first bit plane.

8. The method of claim 7, wherein:

the codeword having the first and second states is a one-bit codeword.

9. The method of claim 7, wherein:

the first entropy decoding table does not include a multi-bit codeword for decoding a bit plane with all binary zeroes.

10. The method of claim 7, comprising the further step of:

providing a second entropy decoding table for decoding at least one bit plane that follows the first bit plane; wherein:

the second entropy decoding table includes a multi-bit codeword for decoding a bit plane with all binary zeroes.

11. The method of claim 7, wherein:

the transform coefficient data comprises Discrete Cosine Transform (DCT) data.

12. The method of claim 7, wherein:

the transform coefficient data comprises image data.

13. A digital signal carrying data for efficiently coding of a plurality of bit planes in which transform coefficient data is carried, comprising:

(a) a codeword having a first state designating that a bit plane comprises all binary zeroes, and a second state designating that a bit plane does not comprise all binary zeroes; wherein:

the most significant bit (MSB) bit plane is coded with said codeword in its first state when the MSB bit plane comprises all binary zeroes; and

proceeding from the MSB bit plane toward the least significant bit (LSB) bit plane, each successive bit plane that comprises all binary zeroes is coded with said codeword in its first state, if any such

successive bit planes are present, until a first bit plane that does not comprise all binary zeroes is reached;

(b) said codeword in its second state for coding said first bit plane; and

(c) at least one codeword following said codeword in its second state obtained from a first entropy coding table according to the bits in said first bit plane.

14. The signal of claim 13, wherein:

the codeword having the first and second states is a one-bit codeword.

15. An apparatus for efficient coding of a plurality of bit planes in which transform coefficient data is carried, comprising:

(a) means for providing a codeword having a first state designating that a bit plane comprises all binary zeroes, and a second state designating that a bit plane does not comprise all binary zeroes;

(b) means for coding the most significant bit (MSB) bit plane with said codeword in its first state when the MSB bit plane comprises all binary zeroes;

(c) means for coding each successive bit plane that comprises all binary zeroes with said codeword in its first state, if any such successive bit planes are present, proceeding from the MSB bit plane toward the least significant bit (LSB) bit plane, until a first

bit plane that does not comprise all binary zeroes is reached; and

(d) means for coding said first bit plane with said codeword in its second state, followed by at least one codeword obtained from a first entropy coding table according to the bits in said first bit plane.

16. The apparatus of claim 15, wherein:

the codeword having the first and second states is a one-bit codeword.

17. The apparatus of claim 15, wherein:

the first entropy coding table does not include a multi-bit codeword for coding a bit plane with all binary zeroes.

18. The apparatus of claim 15, further comprising:

a second entropy coding table for coding at least one bit plane that follows the first bit plane; wherein:

the second entropy coding table includes a multi-bit codeword for coding a bit plane with all binary zeroes.

19. An apparatus for decoding a plurality of bit planes in which transform coefficient data is carried, comprising:

(a) a decoding function for a codeword having a first state designating that a bit plane comprises all

binary zeroes, and a second state designating that a bit plane does not comprise all binary zeroes;

wherein the most significant bit (MSB) bit plane is coded with said codeword in its first state when the MSB bit plane comprises all binary zeroes;

(b) means for decoding said codeword in its first state for each successive bit plane that comprises all binary zeroes, if any such successive bit planes are present, proceeding from the MSB bit plane toward the least significant bit (LSB) bit plane, until a first bit plane that does not comprise all binary zeroes is reached; and

(c) means for decoding said codeword in its second state for said first bit plane, then using a first entropy decoding table for decoding at least one codeword that follows said codeword in its second state;

wherein the at least one codeword is obtained from a first entropy coding table according to the bits in said first bit plane.

20. The apparatus of claim 19, wherein:

the codeword having the first and second states is a one-bit codeword.

21. The apparatus of claim 19, wherein:

the first entropy decoding table does not include a multi-bit codeword for decoding a bit plane with all binary zeroes.

22. The apparatus of claim 19, further comprising:

a second entropy decoding table for decoding at least one bit plane that follows the first bit plane; wherein:

the second entropy decoding table includes a multi-bit codeword for decoding a bit plane with all binary zeroes.